

# Why AI Needs a Platform Approach

“AI Platform for Citizen Data Scientist”

Event with SK holdings C&C

July 8th, 2020

ELEMENT<sup>AI</sup>





ELEMENT<sup>AI</sup>

Work smarter, together.

We help enterprises operationalize AI so that people and machines collaborate better.

# Element AI at a glance



## Strategy

End-to-end support to take AI from lab to production using a combination of leading AI expertise and technology enablers



## Products

Packaged enterprise software for supply chain and financial services industries that help people work smarter



## Research

Access to 200+ AI experts representing nearly every major branch of AI research



## Development

Full-stack AI solution development from proof-of-concept to complete solution including deployment & expansion

350 employees   200 AI experts   70 PhDs   6 offices globally

## 4 Personas of AI Adoption

### Low Risk

*Risks are managed or shifted to other parties, impacting speed of innovation; stable ROI*

### Persona 2

#### AI Consumer

Vendor point solutions  
Tight vendor management  
Corporate governance of AI strategy  
Low cross-department coordination

### Persona 4

#### AI Exploiter

Source of significant differentiation  
Focus on exploitation, not exploration  
Institutional knowledge manages risks  
Innovator's dilemma

### High Risk

*Innovation focus, but subject to learning costs as institutional knowledge builds; unstable ROI*

### Persona 1

#### AI Follower

Consuming AI as traditional software  
Data Science / Analytics Platforms  
Departmental or implicit governance  
No coordination across departments

### Persona 3

#### AI Innovator

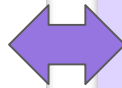
Source of significant differentiation  
Innovation culture horizontally  
Portfolio approach  
Low gap from invention to implementation

### Low Impact

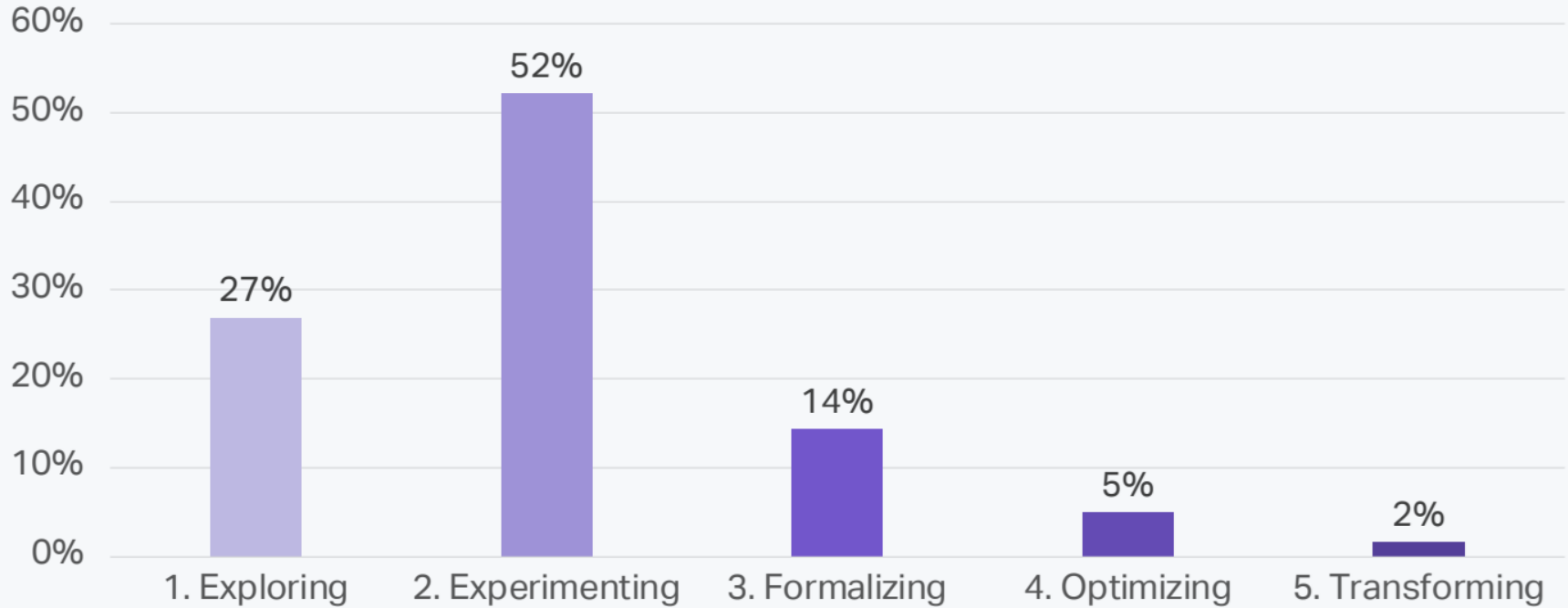
*Tactical usage of AI only, moderate ROI*

### High Impact

*Strategic & tactical usage of AI, potentially high ROI*

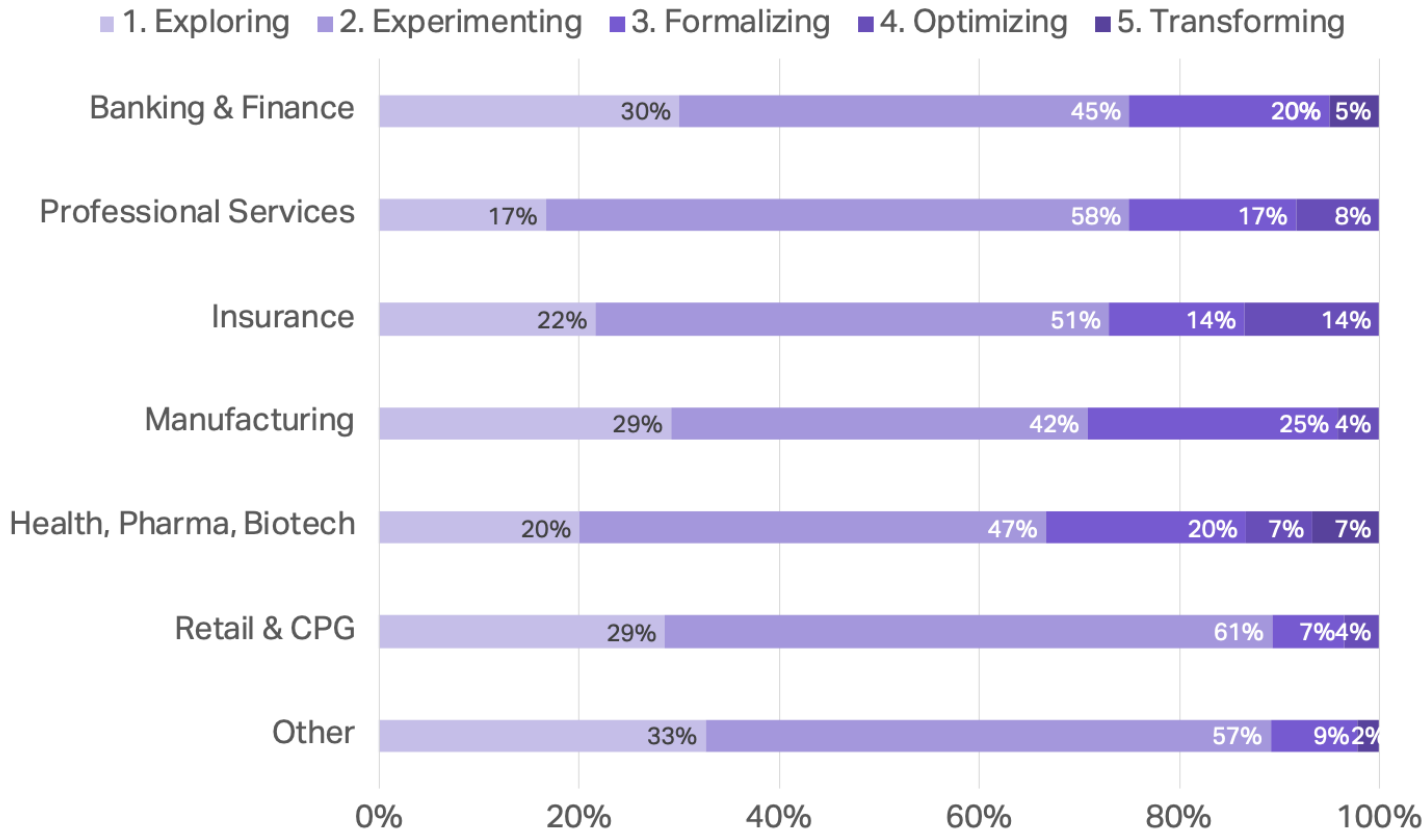


**Figure 1: Distribution of organizations by stage of AI maturity**



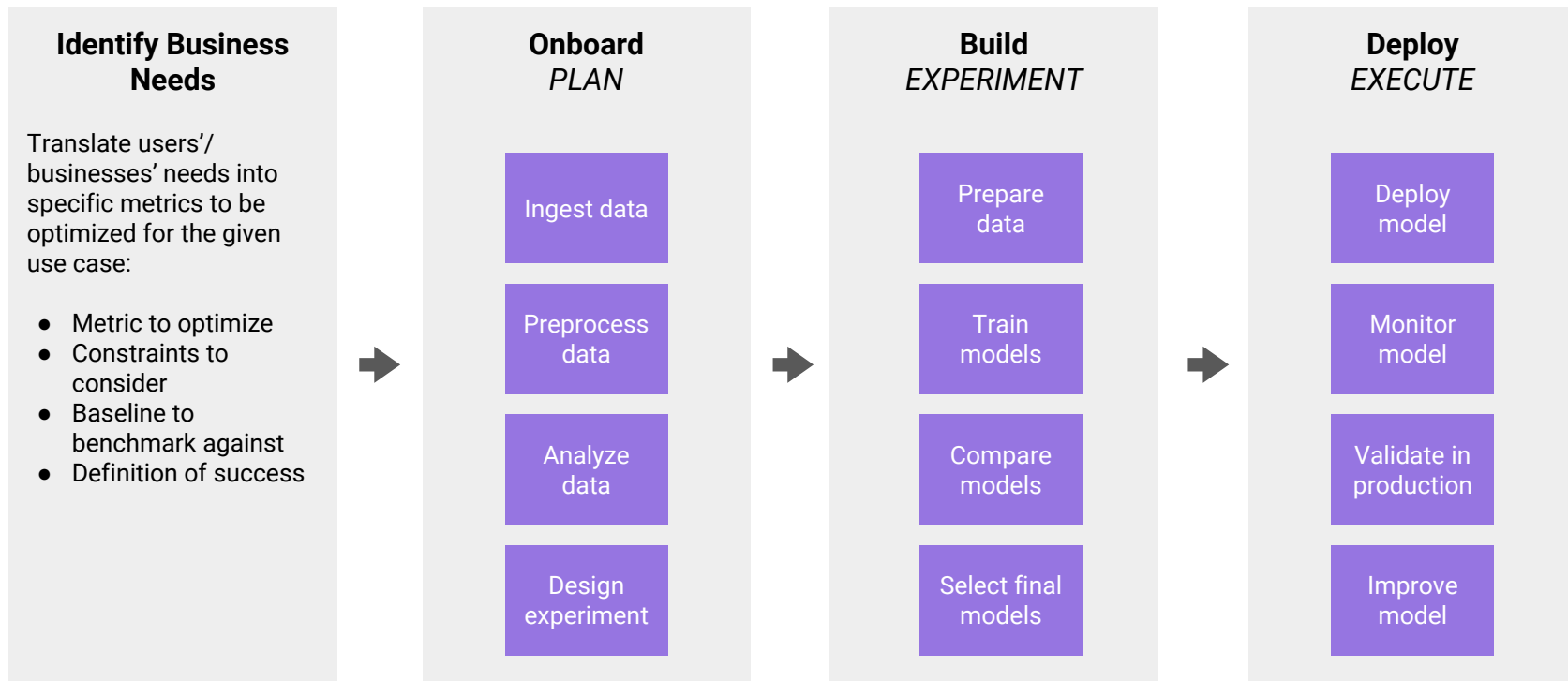
**Source: The AI Maturity Framework Survey**

**Figure 2: Distribution showing percentage of organizations in each industry that have reached each stage of maturity**

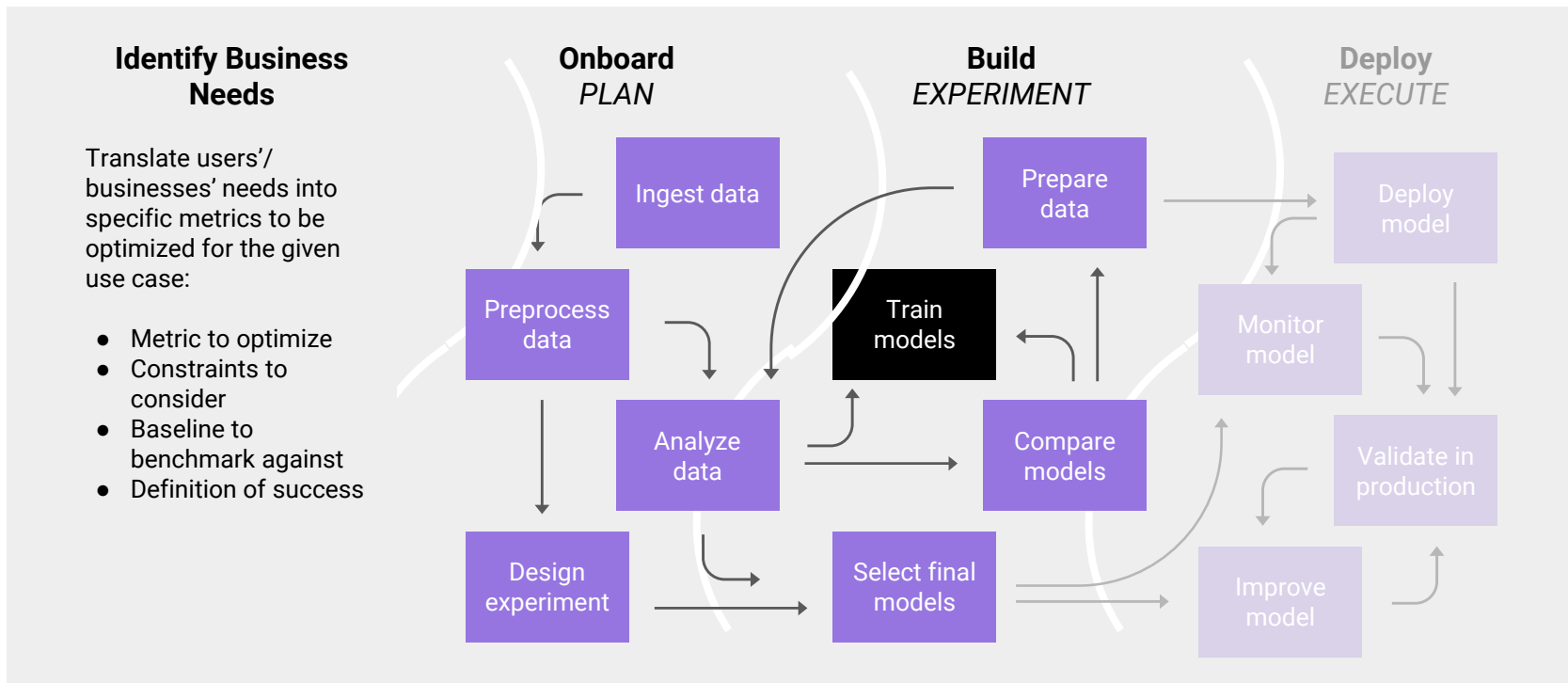


**Source: The AI Maturity Framework Survey**

## In theory, the process to build AI seems straightforward and linear.



**In practice, the process is much more iterative – and it's hard.**  
Without proper tools, the process is complex and time-consuming





## Businesses attempting to operationalize AI are facing many of the same challenges

1

### AI labs are siloed from business units

- Only 1 in 10 pilots make it into production
- There is a challenge going from data to a working model
- Models degrade over time as there is no iteration loop between business ops results and model updates.

2

### AI solutions are built as one-offs

- Custom solutions make IP reuse difficult or impossible
- Different deployment architectures ≠ scalable over time

3

### No visibility into how AI delivers value

- No data governance, no monitoring = AI models can go rogue
- No understanding of how AI performance impacts business metrics

# AI Enablement: 3 Pillars

1

## Build a state-of-the-art AI muscle

*Gain privileged access to the tools, best practices, and state-of-the-art research required to drive business impact with AI. Maximize team productivity with specialized tools and optimized hardware.*



### INNOVATIVE

Arm teams with data mgmt and modelling tools to poise them for success.



### EFFICIENT

Optimize investment in and usage of hardware, and continuously shorten AI project dev time for faster business impact.

2

## Foster more impactful collaboration

*Empower biz units + innovation teams to better collaborate on ROI-driving use cases by bridging their tools and processes. Measure and demonstrate how model performance relates to business KPIs.*



### COLLABORATIVE

Collaboration between AI and non-AI teams in a single environment.



### TRANSPARENT

Demonstrate ROI and get quick internal buy-in with an explainable dashboard that ties AI performance to business metrics.

3

## Future-proof your investment

*Everything you produce – from models to benchmarking and deployment – should be reproducible and secure. Standardize workflows, prevent model drift and easily incorporate the latest advances in AI with a single technology partner.*



### ROBUST

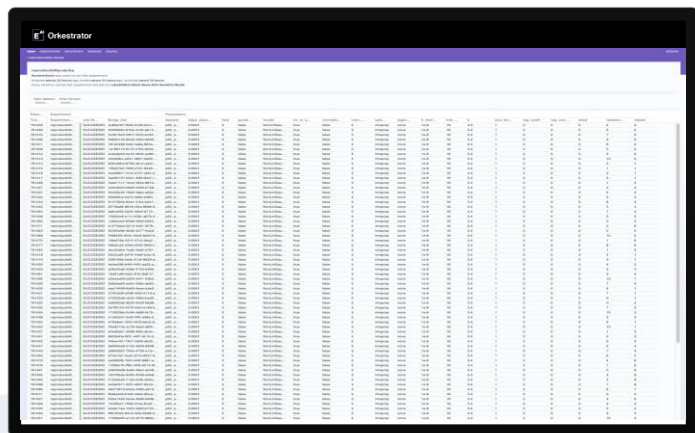
Maintain solutions with version control and retraining tools to prevent model drift. Security features to protect your data, models and business processes.



### ON YOUR TERMS

Flexible deployment options (on prem or on the cloud), and protect and maintain ownership of your IP.

# E<sup>AI</sup> Toolkit



Experiment Framework

## Empowers AI practitioners to test AI modeling hypotheses at scale

- ✔ Leverages the Orchestrator to test up to thousands of configurations at once.
- ✔ Results are displayed in realtime on an interactive dashboard for further analysis, to track progress, and share results and learnings.
- ✔ Allows multiple models to be compared under the same conditions and for the same metrics.

Sample results: Annotating defects on 20,000 road images

How to find the “best” model configuration	Time required (depends on # of configs)
Traditional ML technique Train 1 single model configuration overnight - repeat for every new iteration	Approx. 3 weeks
EAI Toolkit with Experiment Framework Get to the right model configuration faster. Train dozens of different model configurations in a matter of hours instead of weeks.	Approx. 1 day

# E<sup>AI</sup> Orkestrator



EAI Orkestrator optimizes the use of compute and storage resources by bridging the gap **between the needs of your AI practitioners and your compute infrastructure.**

- ✔ Optimize your GPU cluster
- ✔ Increase overall productivity
- ✔ Maximize your specialized resources
- ✔ Future-proof IT infrastructure



# Conclusion